



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/679,015	10/02/2003	Vivek P. Singhal	035574-003	8890

7590 08/03/2006

Robert E. Krebs
THELEN REID & PRIEST LLP
P.O. BOX 640640
San Jose, CA 95164-0640

EXAMINER

ALI, MOHAMMAD

ART UNIT	PAPER NUMBER
----------	--------------

2166

DATE MAILED: 08/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/679,015

Applicant(s)

SINGHAL ET AL.

Examiner

Mohammad Ali

Art Unit

2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20,26-41,51-70 and 86 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20,26-41,51-70 and 86 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's election without traverse of Group I including claims 1-20, 26-41, 51-70, and 86 in the reply filed on 5/2/06 is acknowledged.

The application has been examined and claims 1-20, 26-41, 51-70, and 86 are pending in this office action.

Drawings

2. Figure 1 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

3. Claims 20 and 70 objected to because of the following informalities: exists multiple and after ';'. Appropriate correction is required.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application

Art Unit: 2166

by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

5. Claims 1-20, 26-41, 51-70, and 86 are rejected under 35 U.S.C. 102(e) as being anticipated by Hickman et al. ('Hickman' hereinafter), USP, 6,523,036.

With respect to claim 1,

Hickman teaches a method for performing a transaction on a database (see Fig. 2), the method comprising:

sending a set of database (see col. 25, lines 23-24, Hickman) modifications requested by the transaction to a first database (see col. 25, lines 57-60, Hickman);

placing a message in one or more message queues, said message indicating objects inserted, updated, or deleted in the transaction (see col. 27 lines 12-25, Hickman);

sending a commit (see Fig. 7B, Hickman) command to the first database (see col. 8, lines 1-8, Hickman); and

sending said set of database modifications and a commit command to a second database (see Figs. 12, 13, Hickman).

As to claim 2,

Hickman teaches inserting a record for the transaction into a transaction ID table in the first database (see col. 25, lines 27-37, Hickman).

As to claim 3,

Hickman teaches wherein said sending a set of database modifications and said inserting are performed in the same transaction (see col. 8, lines 41-49, Hickman).

As to claim 4,

Hickman teaches wherein the method is performed by an application server (see col. 8, lines 22-25 and Fig. 13, Hickman).

As to claim 5,

Hickman teaches sending a cache synchronization message to other application servers sharing the same cluster as said application server (see col. 9, lines 63-64, Hickman).

As to claim 6,

Hickman teaches wherein said set of database modifications comprises a set of structure query language (SQL) insert, update, and/or delete commands (see col. 9, lines 15-20, Hickman).

As to claim 7,

Art Unit: 2166

Hickman teaches wherein said message contains a serialized representation of objects inserted, updated, or deleted in the transaction (see col. 8, lines 41-49, Hickman).

As to claim 8,

Hickman teaches wherein said message contains a serialized representation of objects inserted, updated, or deleted in the transaction (see col. 8, lines 41-49, Hickman).

As to claim 9,

Hickman teaches wherein said serialized representation further includes said insert of said record (see col. 8, lines 41-49, Hickman).

As to claim 10,

Hickman teaches indexing messages contained in said message queue for rapid access (see col. 27, lines 10-15, Hickman).

As to claim 11,

Hickman teaches receiving said cache synchronization message at another application server (see col. 9, lines 63-64, Hickman);

extracting a transaction ID from said cache synchronization message (see col. 9, lines 63-64, Hickman); and

discarding messages containing said transaction ID from one or more message queues (see col. 28, lines 55-56, Hickman).

As to claim 12,

Hickman teaches periodically deleting old rows from said transaction ID table (see col. 29, lines 1-10, Hickman).

As to claim 13,

Hickman teaches wherein said periodically deleting is performed using a background thread (see col. 28, lines 55-56, Hickman).

As to claim 14,

Hickman teaches wherein said sending said set of database modifications and a commit command to a second database and said sending a cache synchronization message are performed asynchronously on separate threads (see col. 9, lines 63-64, Fig. 7B, Hickman).

As to claim 15,

Hickman teaches detecting a failure of said first database (see col. 8, lines 1-8, Fig. 3, Hickman);

halting completion of the transaction in said first database (see col. 8, lines 1-8, Hickman);

including in said cache synchronization message an indication that said first database is down (see col. 9, lines 53-54, Hickman); and

refraining from performing further actions involving said first database until said first database is restored (see col. 8, lines 1-8, Fig. 10, Hickman).

As to claim 16,

Hickman teaches replaying said database inserts, updates, and/or deletes in said cache synchronization message at a recovery server when said first database is restored (see col. 28, lines 55-56, Hickman).

As to claim 17,

Hickman teaches detecting a failure of said second database (see col. 8, lines 1-8, Fig. 10, Hickman);

including in said cache synchronization message an indication that said second database is down (see col. 9, lines 53-54, Hickman); and

refraining from performing further actions involving said second database until said second database is restored (see col. 8, lines 1-8, Fig. 10, Hickman).

As to claim 18,

Hickman teaches detecting a failure of a first recovery server (see col. 26, lines 20-25, Hickman);

detecting reactivation of said failed first recovery server (see col. 26, lines 20-25, Hickman);

reading a transaction ID out of any queued messages in a message queue corresponding to said first recovery server (see col. 26, lines 1-5, Hickman); and

deleting any message in said message queue that has a transaction I.D matching a transaction ID in a corresponding row of said transaction ID table (see col. 28, lines 55-56, Hickman).

As to claim 19,

Hickman teaches detecting a failure of a message queue (see col. 25, lines 50-55, Hickman);

detecting reactivation of said failed message queue (see col. 25, lines 50-55, Hickman);

deleting any messages in said failed message queue (see col. 28, lines 53-54, Hickman);

sending a message to a recovery server containing a time stamp of a first new message processed by said message queue (see col. 8, lines 1-8, Hickman);

receiving a message from said recovery server indicating that an oldest message still in its queue is not older than said time stamp (see col. 16, lines 30-31, Hickman);
and

resuming normal operation upon receipt of said message from said recovery server (see col. 26, lines 20-25, Hickman).

As to claim 20,

Hickman teaches detecting a failure of an application server (see col. 8, lines 1-8, Fig. 13, Hickman);

determining if said failure was detected during a communication with a first database or message queue (see col. 8, lines 1-8, Hickman);

aborting the transaction if said failure was detected during a communication with a first database or message queue (see col. 14, lines 21-35, Hickman);

determining if a message has been in a message queue for a predefined period of time (see col. 28, lines 53-54, Hickman); and

discarding said message if a transaction ID for said message is not contained in a transaction ID table in said first database (see col. 8, lines 1-8, Fig. 13, Hickman); and
replaying said set of database modifications to said second database if a transaction ID for said message is contained in said transaction ID table in said first database but not in a transaction ID table in said second database (see col. 2, lines 60-65, Fig. 13, Hickman).


Claims 26-41, 51-70, and 86 have the same subject matter as of claims 1-20 and essentially rejected for the same reasons as discussed above.

Contact Information

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad Ali whose telephone number is (571) 272-4105. The examiner can normally be reached on Monday-Thursday (7:30 am-6:00 pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hosain T. Alam can be reached on (571) 272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Mohammad Ali
Primary Examiner
Art Unit 2166

MA
July 29, 2006